We claim:

1. An insulating jacket for an electronic device, the jacket comprising:

an absorbing material comprising a heat-resistant, organic, polymeric material defining a space shaped to receive the device; and

a liquid cooling-agent;

wherein the liquid cooling-agent is absorbed within at least a portion of the absorbing material.

2. The jacket of claim 1, wherein the polymeric material comprises a polyimide.

3. The jacket of claim 1, wherein the polymeric material has a glass-transition temperature greater than 250 °C.

4. The jacket of claim 1, wherein the absorbing material comprises a network of fibers.

5. The jacket of claim 1, wherein the liquid cooling-agent does not substantially penetrate the polymeric material.

6. The jacket of claim 1, wherein the liquid cooling-agent is chilled to below room temperature.

7. The jacket of claim 1, wherein the density of the absorbing material is between about 50 $kg/m^3$ and about 500 $kg/m^3$.

8. The jacket of claim 1, wherein the liquid cooling-agent is water.

9. The jacket of claim 1, further comprising an electronic device positioned within the jacket, wherein the jacket is shaped to fit closely around the electronic device.

10. The jacket of claim 1, further comprising an electronic device positioned within the jacket, wherein the electronic device has two or more temperature sensors, at least one of the temperatures sensors is positioned within the absorbing material, and at least one of the temperature sensors is positioned external to the jacket.

11. The jacket of claim 1, wherein an interior of the jacket is lined with a substantially non-absorbing liner.

12. The jacket of claim 11, wherein the liner comprises a material with a glass-transition temperature greater than 200 °C.

13. The jacket of claim 11, wherein the liner comprises a material selected from the group consisting of non-absorbing, organic, polymeric materials and metals.

14. The jacket of claim 11, wherein the liner comprises stainless steel.

15. An insulating jacket for an electronic device, the jacket comprising:

an absorbing material comprising a network of heat-resistant, organic, polymeric fibers; and

a water-resistant liner;

wherein the liner is positioned on the inside of the jacket and the absorbing material is capable of absorbing liquid.

16. The jacket of claim 15, further comprising a liquid cooling-agent absorbed within at least a portion of the absorbing material.

17. The jacket of claim 15, wherein the absorbing material consists essentially of materials with glass-transition temperatures above 250 °C.

18. The jacket of claim 15, wherein the liner comprises a material selected from the group consisting of non-absorbing, organic, polymeric materials and metals.

19. A method for measuring temperature comprising:

providing an electronic device surrounded by an absorbing material, the absorbing material comprising a heat-resistant, organic, polymeric material;

wetting the absorbing material with a liquid cooling-agent; and

introducing the electronic device surrounded by the wetted absorbing material into an environment to be monitored.

20. The method of claim 19, wherein the liquid cooling-agent is chilled to below room temperature.

21. The method of claim 19, wherein the absorbing material comprises a network of polyimide fibers.

22. The method of claim 19, wherein the jacket further comprises a substantially non-absorbing liner positioned on the inside of the jacket.

23. The method of claim 19, wherein the liquid cooling-agent is applied to the jacket from a hand-held container.

24. The method of claim 19, wherein the environment to be monitored is at a temperature greater than 120 °C.

25. A method for finding relative humidity comprising:

providing an electronic device surrounded by an absorbing material;

wetting the absorbing material with a liquid cooling-agent;

introducing the electronic device surrounded by the wetted absorbing material into an environment to be monitored;

measuring the temperature within the absorbing material;

measuring the temperature of the environment; and

calculating relative humidity.